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ACUTA NEWS

Association of College & University Telecommunication Administrators

THE VOICE OF TELECOMMUNICATIONS IN HIGHER EDUCATION

VOLUME 12, NUMBER 12 DECEMBER, 1983 RUTH A. MICHALECKI, EDITOR

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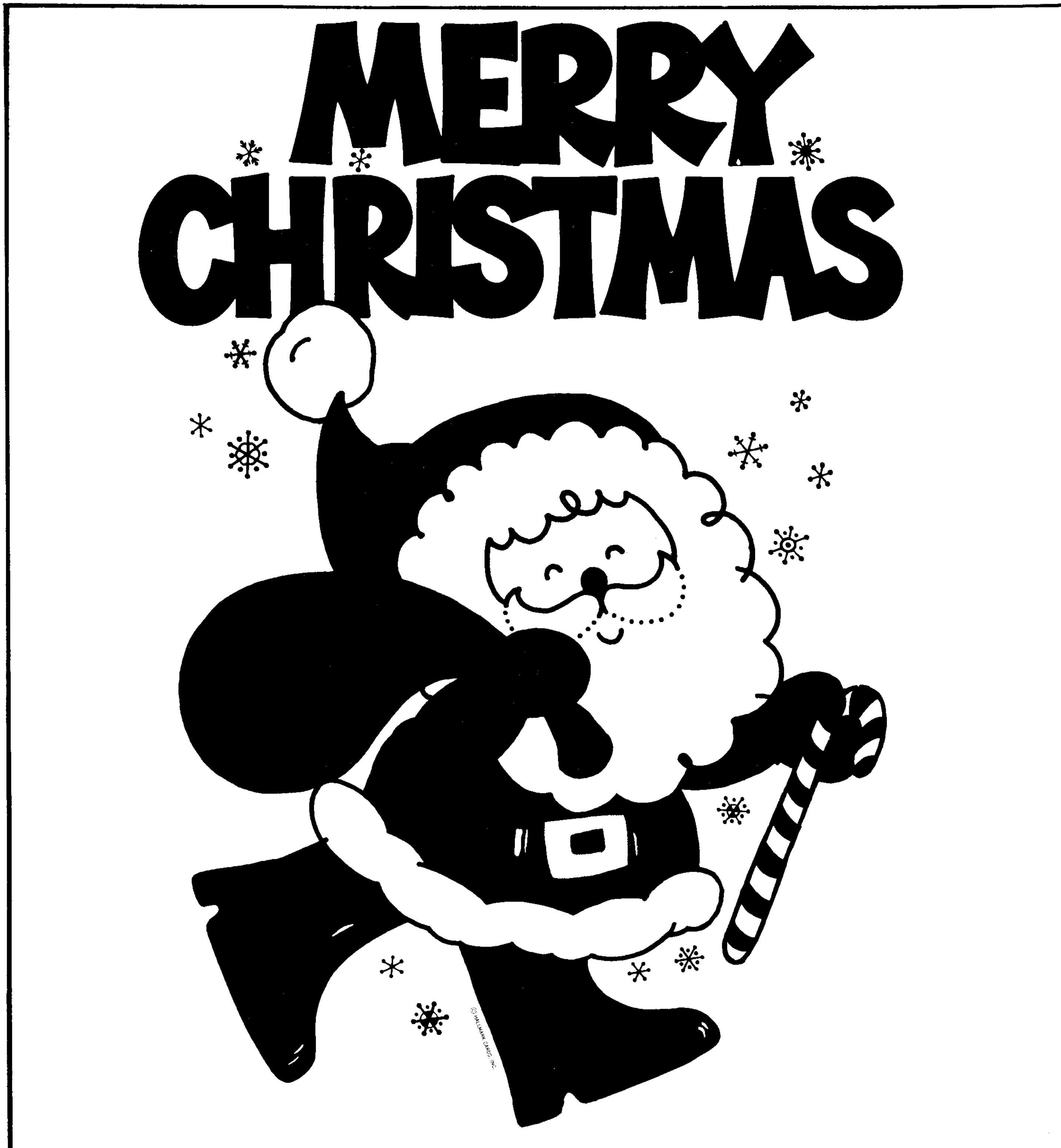


PRESIDENT'S MESSAGE

The recently concluded Nashville fall seminar was, to say the least, an outstanding success. It is always very nice to hear from new people, attending an ACUTA function for the first time, that we put together "very professional" meetings. This was definitely again the case with the Nashville meeting. Seventy registrants participated in what we feel was the best seminar to date.

This seminar, designed to bring ACUTA members up to date on the newly proposed LATA structure and Access Charges, did exactly that and more. Joe Massey's presentation on the LATA structure was, as usual, very entertaining and informative.

Mike Toner at Nashville Fall Seminar

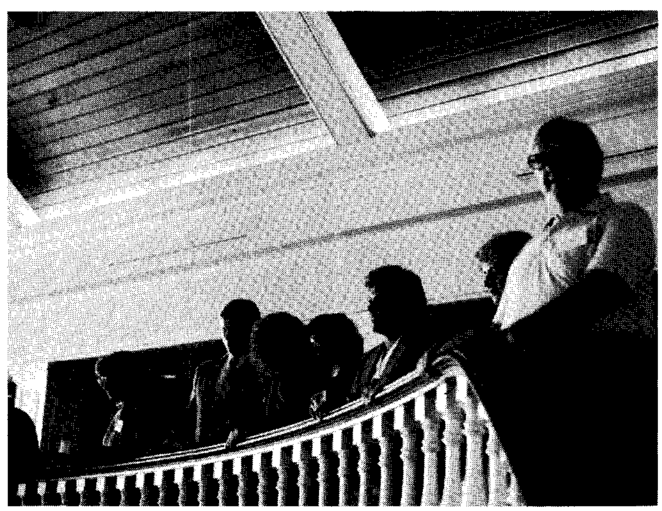
In addition to everything else, the accomodations at the Opryland Hotel were outstanding. All the fine arrangements for this meeting were the result of long planning and hard work on the part of Mike McCaw of Northern Telecom and Andy Booker of Vanderbilt. Congratulations and a special thanks to Mike for hosting our finest seminar to date. Your efforts are apprecicated and will be long remembered.

Coincidently, since the conclusion of the Nashville seminar, the Access Charge issue has been in the papers daily. It is interesting to note the amount of public interest the Access Charge issue has created. Many feel as I do that many of the deregulation changes are clearly not in the public interest and Access Charges, especially as they will apply to Centrex, are one of the most blatant examples of this. Fortunately, and hopefully not too late, user groups across the country are severely questioning these charges and bringing heavy pressure on their congressional representatives to have a second look. The result to date is the Access Charges, originally scheduled to go into effect on 1-1-84, have been delayed until at least 4-1-84.

In Wisconsin at least, users of residence service are becoming quite vocal in their opposition to recently filed requested rate hikes and proposed local measured service. This pressure is making the Public Service Commission become very sensitive to the needs and feelings of residence telephone users. So, making your views known does work. All the more reason for each of us to get involved and write to our respective Senator or Congressman, inform them of your particular situation and ask them to support your views. Had more of this kind of activity taken place a few years ago, divestiture might have taken on a different composure and among other things we might not today be facing the advent of LATAs and access charges.

And finally this month, I would like to mention the Special ACUTA Nashville Fall Seminar Country Music Groopie Accolades. These go to Patti Jeffries and Jo Ann Kaelin for the long hours they spent diligently patrolling the lobby in search of celebrities willing to sign autographs and pose for pictures. Mal Reader is also to be remembered for boldly firing off his camera point blank in Johnny Cash's face as he was hurrying across the lobby only to find out he had no film in the camera!

Sincerely,
Michael A. Toner
President



ACUTA members "in search" of celebrities

TRIVIA

Four of the USA's fastest-growing jobs in the next decade will be high-tech. A Bureau of Labor study says the job with the biggest growth through 1995 will be computer technician--up a whopping 96.3%. Biggest losers will be taxi drivers, telephone operators and aircraft assemblers.

BITS & PIECES

...by Ruth Michalecki

"D-DAY" (Divestiture/Deregulation) is fast approaching and if we ever had anything in common with our local operating companies--we do now. No one knows what is happening from one day to the next. Those least in the know, work for the local operating company or AT&T. Which one, they do not know.

I have a lot of sympathy for them--the situation is confusing. Every magazine or paper I pick up has some feature story about the break-up (and most of them have a slightly different explanation of what is going to happen). One thing for certain, AT&T will emerge as a high-technology growth company as opposed to telephone common stock (long considered as a SAFE investment for widows and orphans). The stock will be more volatile and the price/earnings ration ought to be far higher that in past years.

Have you noticed (and how could you miss), the advertising campaign being waged by AT&T and the Regional companies? They are reaching out and touching us to the tune of $640 million this year, according to a news story in USA TODAY. Phone bills are so stuffed with informational tidbits and ads, the bill somewhat resembles sardines in a can. Television ads keep reminding us that when we need to place a call between Podunk, Nebraska and Big Valley, Wyoming, AT&T is our one reliable source. They seem to be saying that when all this legal business is over, they will still be here and they will still care about the completion of our call. Then, of course, they are letting us know how vital it is to our interests, that Congress and the Senate stay out of the decision on access charges (CALC). One of the more interesting things about the telephone companies advertising, most of them are NOT selling anything. Their ads are mainly directed to cosumer information, and to indentity on Wall Street....

As I stated earlier, you can hear a different story from each person you talk to, but one source has been quoted predicting AT&T's fate will hinge upon Western Electric, the manufacturing arm of AT&T. Western Electric had sales of $12.6 billion last year--manufacturing 390,000 different items--they supplied 80% of the Bell system's equipment needs; 90% of their production went to Bell.

The big question--can **Western Electric** go from a slow-moving company with a good record of massive production in a hand-to-mouth relationship with the Bell System, never having a need to market a single thing--to a company with quick reflexes, able to feel out the market place, get the new technology out of the labs, produce it and then sell it--and above all, retain its reputation for quality and low costs? The success of Western Electric is vital to AT&T, since they represent some 33% of AT&T's assets and 30% of their consolidation moves have been made, closing down plants and eliminating over 10,000 jobs. They have hired marketing consultants to teach them to think like competitors. Already the BOCS are signing contracts with other suppliers and manufacturers--it will be interesting to watch future activity at Western Electric.

I have asked various individuals from the Regional Companies and also a few marketing persons in the local operating companies, about the future of Key Systems (the 10A2 and 1A2 systems). Although I am assured they will still be offered, for how long and what the service/maintenance program will be no one is willing to be quoted...

In a statement made over a year ago, ACUTA's dear friend, **Harry Newton**, felt the time was ripe for some entreprenaur to enter this marketplace. I know of one local (Lincoln, NE) business who has had considerable success in the small key system market. Our local telco simply doesn't offer anything but the new electronic systems or the standardize key system. Nothing for the small (2 stations, maybe no more than 5 sets) customer. I don't know what the rest of you are doing in regards to the service/installation charges on Key Equipment, but in Lincoln, the costs for this servce is beyond all belief! That alone, should tell us they are pricing this equipment out of the market.

The breakup of AT&T--the largest such move in Wall Street history--will mean 1 1/2 cents more in quarterly dividends for stockholders, according to AT&T.

Stockholders will retain their shares in the smaller AT&T and get one share in each of seven new regional phone companies for every 10 shares of AT&T they own. The last quarterly dividend before Jan. 1 reorganization will be $1.35 for shareholders of record Dec. 30. The new AT&T and seven regional companies will pay $1.365 a share in 1984 first quarter dividends. ☎

Participants at fall seminar

INNOVATIVE COMMUNICATIONS SYSTEM PUTS F.I.T. IN FRONT

...by David A. Culley

MELBOURNE, FL., Nestled restfully among pine trees and towering palms indigenous to the East Coast of Florida, it takes a bit of imagination to realize that your are only a few short miles from the nation's space embarkation point at Cape Canaveral. Broad expanses of green grass and wandering walkways are curiously incongruous with the concrete and steel of NASA's launch-pad machinery to the North of the campus. But aside from their divergent settings, Florida Institute of Technology and the Kennedy Space Center share a great deal in common.

Founded in 1958 by its current president, Dr. Jerome P. Keuper, F.I.T. began for the purpose of offering science and engineering courses to specialists who came to Cape Canaveral to work on the space program. The primary aim of the university has been to keep abreast of current and anticipated needs in the developing fields of high technology. This philosophy is reflected in F.I.T.'s aggressive response to the nation's growing need for qualified specialists trained in the fields of science and engineering.

The success of the university in its twenty-five year history has been so impressive that F.I.T. is now ranked as the second largest private university in the State of Florida (behind the University of Miami in Coral Gables). F.I.T offers nine Doctoral Degree programs, 33 Master's Degree programs, 50 Bachelor Degree programs, and 13 Associate Degree programs through its two campuses--the main campus at Melbourne and a satellite campus at Jensen Beach. Currently over 7,000 full-time students are working toward degrees at F.I.T.

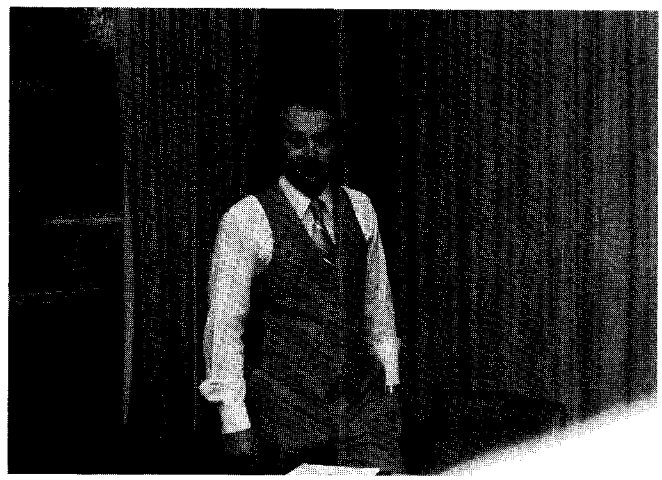
In the midst of this atmosphere of technological innovation, it is hardly surprising that a new concept in communications efficiency has developed for the school.

Teaming with giant AT&T and the communications company's Information Systems organization, F.I.T. has become the first university in Florida, and one of only a handful of universities in the world, to have developed a fully integrated communications resale network which is not only technologically innovative but provides for the significant generation of money resources for the school as well.

According to Patrick H. Murphy, F.I.T.'s Director of Personnel and the originator of the idea, the real catalyst for the new high-tech communications system came about rather naturally, "Administratively," says Murphy, "our need began for a new phone system as we had outgrown our old one."

Added to that, Murphy goes on, are factors related to the recent deregulation of the phone industry and the court-ordered break-up of the Bell System. "Not only were we able to consider purchasing our communications system," he states, "but we could also look at the ability to resell the service to our students."

The past situation at F.I.T. is not unique. With 585 on-campus dormitory rooms, only a portion of the school's 1500 resident students were able to have convenient phone service. "In fact," says Murphy, "less than one-third of the rooms had private phones." This was because of several factors including the fact that wiring to all the rooms was not possible. Mostly, however, F.I.T. students could not afford the cost of in-room phone service. According to AT&T Account Executive Gil Wolfe, "students wanting a phone had to come up with a deposit to the phone company of between $100-$200, pay an installation charge of $50-$75., pay about $15 per month in local charges, and of course, handle long distance charges for calls out of area."



Patrick H. Murphy
Director of Personnel-F.I.T.

Long distance charges, according to a study by F.I.T.'s Murphy, were "astounding". "The average monthly long distance costs were over $45.00 per student," he said. An added negative, according to the study, was the fact that students often had to wait in line for an hour or more to use the pay phones located in the hallways of the dorms.

The solution to the university's problems did not come easily. "The question was how to handle the growing communications needs of the administration and provide the students with better service too," said Murphy, "and how to do it all with one system." That's when AT&T became involved.

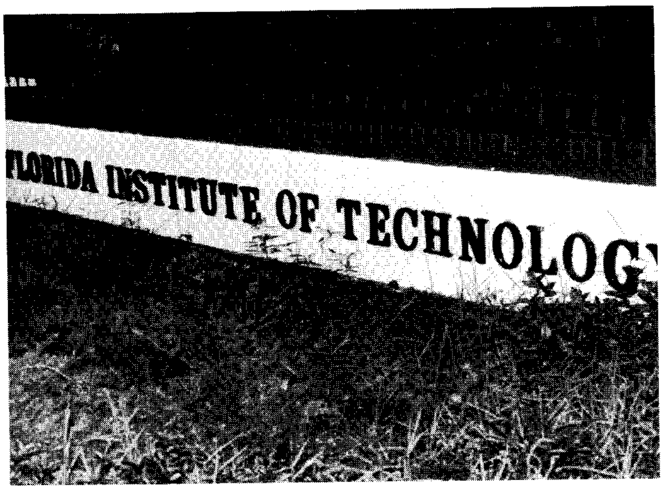
According to AT&T's Wolfe: "Basically, we started with a blank page. We said `lets

(Continued on page 5)

(Innovative Communications-F.I.T.) Continued:

consider taking out the existing system entirely and provide one big switch for everybody--administration and students alike'."

The answer was a fully integrated AT&T product named Dimension 2000, feature package 8. This PBX (public branch exchange) handles the transmission of voice and data and allows for accessibility from the more than 1100 telephone stations required by the university. "In this way," relates F.I.T.'s Murphy, "each dormitory room will be automatically provided with phone and students will not have to pay the cost of installation themselves."



What will the student have to pay? "Basically" says Murphy, "very little." In fact, aside from a nominal "hook up" fee, to cover the expense of distributing a special access code number for students, and a small monthly charge billed as a part of the student's quarterly dorm bill, there are no other on-going charges. Naturally the student will have to pay for whatever long distance expenses they incur but says Murphy "these charges will be no more than the normal Direct Distance Dialing (DDD) charges of the phone company." This is because all long distance calls will be placed through the new system on lower cost WATS lines already in place, according to Murphy.

Not only cheaper, says Murphy, but also in tune with the growing technology taking place today. "Within three to five years," he says, "students will be able to tie-in to our main computers with in-room terminals or personal computers owned by the student. This will allow for an enhanced learning experience and perhaps off-load some of the instructor's time in the classroom."

Sound futuristic? It is! "With the new system," Wolfe confides, "the student and the university have all the cards--that is, they can choose whatever enhancements they wish to add. The key to the system is its modularity and programmed in anti-obsolescence features."

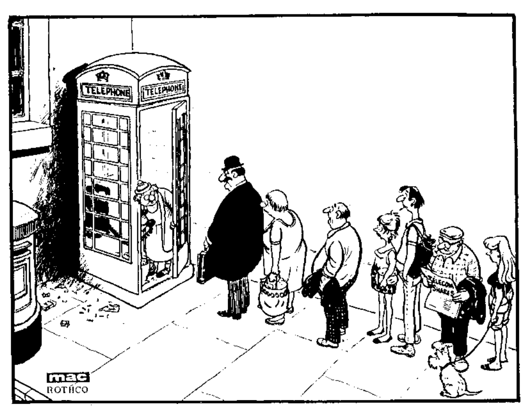
Keeping track of usage for purposes of billing for long distance charges will be accomplished in a most unique way by tieing the system directly in to an AT&T Billing System utilizing a VAX 11/730 computer and proprietary software package developed by AT&T and Digital Equipment Corporation. This system tracks security, costing, accounting, trouble reporting and billing reports. "This is what really makes the resale application viable," says Wolfe.

Student benefits, aside from greatly reduced costs, also accrue from the system's inherent features such as room to room calling, call forwarding, call waiting, and in-room privacy. "In addition," says Murphy, "a student who may be away from the campus will be able to access the system from a remote location by calling a remote access number and keying in his or her special authorization code. This will allow the student the benefit of lower long distance charges even when away from school."

Can this concept be adapted at other schools and universities? "You bet!" smiles Murphy. "With this concept, everyone wins. Not only is it less expensive and far more useful, it also provides revenues to the university because what we charge students for usage becomes part of our income, not the income of the phone company. Our projections show we will pay for the new system within five years."

At F.I.T., technology and innovation again put the university up front with a communications system sure to be considered a first.

(About the author: Dave Culley, a Floridan with many published articles to his credit, is AT&T's Manager of Corporate Relations in the State of Florida. Working directly with AT&T Information Systems, Culley's responsibilities include public relations, community affairs, and internal communications.)



"There's no point hanging about waiting—I've just bought this one."

A QUANTUM LEAP FOR COMMUNICATIONS

The Federal Communications Commission has gradually been opening the telecommunications industry to competition since 1968. But it was the Justice Dept.'s antitrust settlement this year with American Telephone & Telegraph Co. breaking up the giant telephone company that forced consumers to realize how far-reaching the changes brought by deregulation will be. And that awareness will take a quantum leap on Jan. 1, 1984, when AT&T finally divests itself of its seven phone operating companies.

When that occurs, users and producers alike will be caught in a rush of competition that will drive down the price of some services, push up the cost of others, and lower the cost of equipment. More competition will also make phone companies change their patterns of capital investment. When the shakedown is over, however, most experts believe that the telecommunications industry will be more productive, more effecient, and generally less costly.

No longer will the industry use the pricing mechanism to make telephone service more or less universally available, as it did under regulation. That pricing scheme made more profitable services subsidize the unprofitable ones. Businesses subsidized residential users; long-distance calls subsidized rural ones; and infrequent callers subsidized their more talkative neighbors. "The Bell System was a welfare state with the power to tax and use the proceeds to do good things," says Alfred E. Kahn, an expert in regulatory economies at Cornell University and a consultant to National Economic Research Associates.

WHO PAYS FOR WHAT. While long-distance and local rates will still be under some regulation, the advent of competition means telephone rates will no longer be set so low that almost everyone can afford telephone service. "Prices will now move in a direction that more clearly reflects the cost of providing service," says Gerald R. Faulhaber, director of financial management for AT&T. Such a shift to cost-based pricing will cause a dramatic change in who pays for what. "It may not mean a change in average rates," says Kahn. But he adds: "It will cause a redistribution [of income] from individual users to business and from local callers to long-distance callers."

Although business and long-distance rates will rise less slowly--if not actually decline--there will be a dramatic jump in the cost of local service. Most residential customers in the U.S. can make an unlimited number of local phone calls for an average monthly charge of $11.38. Under cost-based pricing, that flat rate will double. Ultimately, the local telephone companies want to shift customers to metered service in which they pay per phone call.

On top of the proposed local rate hikes, the FCC intends to levy an access charge to replace the subsidy that long-distance users now provide to local users. That support now averages 50 cents to 60 cents of every long-distance dollar. Instead, the FCC wants to charge an access fee of $2 per residential phone line and as much as $6 per business line.

On balance, however, residential consumers eventually will get better service if at somewhat higher rates, and business users will pay considerably less than they do now. The rise in local rates is expected to be offset by the decrease in long-distance rates and by allowing telephone users to buy rather than rent their equipment. "By 1990, the average user won't pay much more than they do now," maintains Robert E. La Blanc, a New Jersey consultant.

Many supporters of deregulation question whether the dislocations will be as serious as opponents say. Last year, they note, the average employee in manufacturing had to work only 1 hour and 20 minutes to pay the average monthly local telephone bill of $11.38. So even if local rates were to double, the impact would not be devastating for most people.

BLOW TO THE POOR? Since 1972, phone rates have increased 43%, but the consumer price index has risen 130%. "Nobody likes rising rates, but even with the increases, phone rates in real terms will only be catching up with the level of prices for other goods and services in 1970," says Nina W. Cornell, president of Cornell, Pelcovits & Brenner Economists Inc. in Washington.

Some of the nation's poor will be hurt by the rise in rates. But rather than proposing to build subsidies into the rates to help the poor, many in the telephone industry are proposing government aid. "There is no reason why there can't be welfare for phone service," says Paul H. Henson, chairman of United Telecommunications Inc. in Kansas City, the third-largest independent telephone company. Some are proposing that the government copy the Food Stamps program and issue "telephone stamps," or even give welfare clients a free telephone hookup, charging them only for the calls they make.

Such arguments are not very convincing to the public. Upset by the jump in the cost of local calls, the public is pressuring regulators and legislators to slow down deregulation. "In the long run, deregulation of the telecommunications industry will benefit consumers, but we're concerned about the transition period," says Robert Nichols, attorney for Consumers Union, which is lobbying for legislation to postpone the price changes. "The next 5 to 10 years will be confusing for consumers," he says.

These opponents are winning support from Capitol Hill. At the beginning of November, the House voted to prevent the FCC from imposing telephone access charges. Of concern to the House was the possibility that, because of the access charge and other

(Continued on page 7)

(A Quantum Leap for Comm.) Continued:

increases, millions of poor or retired people on fixed incomes would be forced to give up their telephones in the face of doubling rates. The Senate promises to consider similar legislation at the beginning of the year.

Most observers believe that it is impossible to stop deregulation. "Technology would have made deregulation happen in any event," says Thomas A. Vanderslice, president of GTE Corp. New ways of transmitting information, such as satellites, cable television, fiber optic cables, and microwave radio, have made it economically and technically feasible to bypass the telephone entirely. Average rates that force businesses to pay more than they want to have encouraged them to set up private networks. And hundreds of companies--including Gannett, Federal Express, and Wang Laboratories--are setting up their own satellite long-distance networks.

'A LOT OF CHOICE.' Supporters of deregulation point out that the century-old telephone business is already benefiting. For example, competition in the equipment business has had the expected benefit of increasing both the variety of products on the market and the features they offer, while cutting their cost. A decade ago, all the telephone could be used for was to dial calls Today, phones can automatically dial memorized numbers, put calls on hold, and time calls.

Similarly, private branch exchange telephone systems for businesses cost little more than they did 10 years ago but can now automatically route outgoing long-distance calls to the least expensive lines and carry computer data as efficiently as voice calls. The ability to purchase telephone equipment "is giving the individual a lot of choice and in the long run the opportunity to save money as compared to having the phone rental built into the rates." says La Blanc.

Competition for long-distance calls has also dramatically reduced those prices. MCI Communications Corp., for instance, charges just 37 cents for a one-minute call between St. Louis and Atlanta. Bell charges 62 cents. And competition has given rise to a variety of services not available from AT&T, such as satellite and data communications services. For example, companies such as Telenet and Tymnet have set up special networks to carry computer data instead of trying to squeeze it into traditional phone lines.

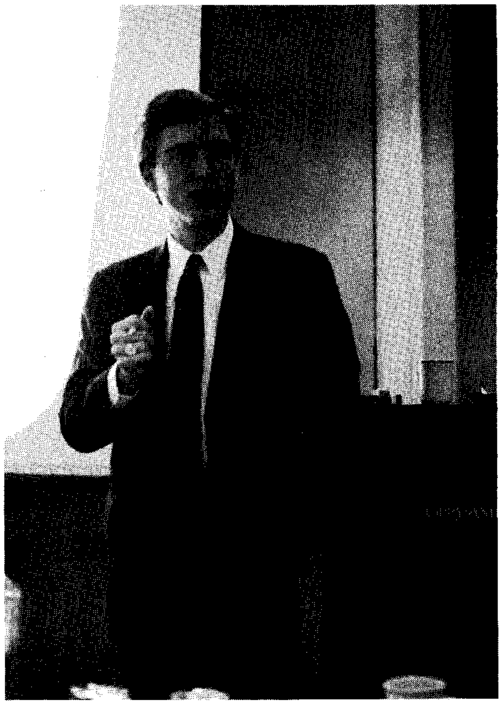
In the long run, diversification will help the market operate more efficiently, but getting from here to there will be a painful process. Because telephone service affects some 96% of the population, the public backlash and the congressional response to that backlash may turn out to be greater than in the other sectors now being deregulated.

GRATIFICATION. "Competition is very messy," says Mark S. Fowler, FCC chairman. "You can't draw nice, clean lines." Fowler's experience so far is a good example of the kinds of passions deregulation of communications can arouse. Public interest groups and members of Congress lambast him for not caring about consumers. Business lobbies complain that he makes it difficult to understand the new competitive environment. Even one of his mentors, Ronald Reagan, has called on Congress to oppose a Fowler pet project--repeal of TV syndication rules. "There is no instant gratification when you go from regulation to deregulation," Fowler says.

The most difficult time in the move toward deregulation is fast approaching. At the start of the year, Fowler will have to deal with AT&T divesting itself of its local phone companies--the biggest step yet in breaking up the communications industry. In the eyes of many, the current telephone system works very well. They cite the old saw: "If it ain't busted, don't fix it." Says Fowler: "The greatest challenge of any regulatory agency is to explain why deregulation is good, to draw pictures."

For Fowler and others behind the drive for deregulation, the picture is simple. "The entrepreneurial spirit has been bridled by decades of mindless regulation," he declares. "While competition in the marketplace isn't perfect, it is better than regulation."

("A Quantum Leap For Communications," is reprinted from the November 28, 1983 issue of BUSINESSWEEK.)



Nashville seminar speaker Joe Massey from JTM Associates, Atlanta, Georgia

AT&T spinoffs: World of change

(Reprinted from the November 18, 1983 issue of USA TODAY)

1 US WEST

- Ticker symbol: USW ⊤
- Stock table abbr.: USWst
- CEO, salary: Jack A. McAllister, $380,000
- Headquarters: Denver
- Assets: $15.05 billion
- Revenues: $7.59 billion
- Earnings: $877 million
- 5-year revenue growth: 12.88 percent
- Employes: 75,000
- Lines: 10,568,000

US West has wasted no time tackling what it sees as its immediate problem: wooing shareholders. Although its territory covers 43 percent of the USA, only 4 percent of AT&T shareholders live there. And because analysts think regional loyalty will be a factor among individual shareholders, US West has mounted a $2.5 million ad campaign and executive roadshow to sway institutional investors.

It will need the capital that healthy stock sales will bring. Its debt problem is one of the worst among the regional companies, and its income per line is low. Thus, US West is counting on aggressive diversification to sustain profits.

It has beaten the other regionals in setting up subsidiaries for directory publishing, premises wiring, and management and consulting services. It also has a mobile communications subsidiary and plans to market some services to other regionals. Basic operations are sound. Despite its huge territory and sparse population, 90 percent of its customers live in or near cities. Its three Bell operating companies have done well at holding down costs.

2 AMERITECH

- Ticker symbol: AIT ⊤
- Stock table abbr.: Amrtc
- CEO, salary: William L. Weiss, $485,000
- Headquarters: Chicago
- Assets: $16.28 billion
- Revenues: $8.34 billion
- Earnings: $924 million
- 5-year revenue growth: 9.61 percent
- Employes: 79,000
- Lines: 14,013,000

American Information Technologies Corp. — Ameritech — faces the most onerous task of any of the new regionals: coping with the depressed economy of the Midwest. Idle plants and high unemployment can wreak financial havoc in a hurry on a phone company.

Yet if any set of companies is braced for such a challenge, the five making up Ameritech seem to be. They have posted the most consistently healthy rates of return of any regional.

They are productive and efficient companies. Investment and employes per line are low, income per line and per employe high. Another efficiency: More construction has been financed internally in the Ameritech region than in any other.

Ameritech, made up of independent-minded operating companies, has adopted a loose, flexible internal structure, emphasizing management by consensus. That flexibility and sound financial undergirding already are giving Ameritech the lead in technology. The company is well ahead in cellular radio. It surprised the industry earlier this year by committing $1 billion to modernize exchanges and win back business customers.

3 NYNEX

- Ticker symbol: NYN ⊤
- Stock table abbr.: NYNX
- CEO, salary: Delbert C. Staley, $387,500
- Headquarters: New York
- Assets: $17.39 billion
- Revenues: $9.83 billion
- Earnings: $938 million
- 5-year revenue growth: 10.05 percent
- Employes: 98,200
- Lines: 12,800,000

The perils of prosperity are facing the company with the funny name — NYNEX, an abbreviation for New York and New England.

The third most profitable regional, NYNEX will serve a stable, dense and affluent population. Each characteristic cuts two ways.

Stability means NYNEX won't have to pour disproportionate energies into merely keeping up with growth. But because the customer base matured early, NYNEX has more old equipment than other regional companies.

A dense population provides enviable economies of scale. But it also makes NYNEX more vulnerable to bypassing — big business customers building their own communications networks.

Affluence translates into continued heavy demand and revenue growth potential for NYNEX. Yet affluent big business customers can better afford to become bypassers.

NYNEX's edges: Most of its heavy-use customers already are charged according to local usage, enhancing its revenue picture. Half the Bell System's fiber-optic cable is in its territory. Knowing it cannot halt bypassing, NYNEX plans to profit from it by selling private network equipment.

Alaska and Hawaii are served primarily by GTE Corp. Connecticut and the Cincinnati area are served by independent phone companies in which AT&T holds — and will continue to hold — minority ownership.

By Bob Laird, USA TODAY

4 PACIFIC TELESIS

- Ticker symbol: PAC ⊤
- Stock table abbr.: Pc Tel
- CEO, salary: Donald E. Guinn, $355,000
- Headquarters: San Francisco
- Assets: $16.19 billion
- Revenues: $8.08 billion
- Earnings: $828 million
- 5-year revenue growth: 14.05 percent
- Employes: 82,000
- Lines: 10,878,000

Like a bloodied boxer with a few tricks left, Pacific Telesis Group will answer the bell next year looking for a win.

The cuts and bruises are many: Regulators have used PacTel as AT&T's whipping boy for years. Keeping up with California's growth — without rate relief — has made PacTel's debt the highest in the Bell System and sent its bond ratings plummeting. It is the least profitable Baby Bell and has the lowest return on equity.

The density and affluence of its customers presents the same two-edged sword faced by NYNEX and Bell Atlantic: Those qualities help keep operating costs down but make customers tempting targets for bypass — private phone networks that take big customers out of the PacTel system. The company sees the private satellite dishes strewn along the coast as its biggest worry.

But chief executive Donald E. Guinn contends that no challenge in the future will be as great as the ones PacTel has already faced — and surmounted. Management proved its ability to outdraw regulators. Despite handicaps, it meets or beats the Bell System average in several indicators of financial performance: return on capital, income per line and employes per line. Its productivity improvement has been the best in the system.

The acid test most likely will lie in how regulators treat PacTel as an independent.

5 BELLSOUTH

- Ticker symbol: BLS ⊤
- Stock table abbr.: Bell So
- CEO, salary: Wallace R. Bunn, $330,000
- Headquarters: Atlanta
- Assets: $20.808 billion
- Revenues: $9.799 billion
- Earnings: $1.199 billion
- 5-year revenue growth: 13.75 percent
- Employes: 99,100
- Lines: 13,591,000

If there's a shining star among the Baby Bells, it's BellSouth — the leader in assets, net income and employes.

It's the most profitable. Its two companies last year had the highest rates of return and the lowest long-term debt ratio.

But one of the region's big pluses — rapid growth (20 percent in the 1970s) — may be a threat. Keeping up with its growing population has given BellSouth $6.3 billion in long-term debt — not a big problem, unless it grows.

The growth juggernaut can hurt in other ways: BellSouth companies had the highest total expenses, investment per line and number of employes per line of any regional last year.

But sweeping productivity gains have erased some minuses. The region now boasts Bell's highest income per employe. Diversification plans include videotex.

6 Bell Atlantic

- Ticker symbol: BEL ⊤
- Stock table abbr.: Bell At
- CEO, salary: Thomas E. Bolger, $433,500
- Headquarters: Philadelphia
- Assets: $16.26 billion
- Revenues: $8.32 billion
- Earnings: $952 million
- 5-year revenue growth: 11.12 percent
- Employes: 80,000
- Lines: 14,247,000

Bell Atlantic was dealt a mixed hand:

- Aces: The lowest operating costs of any regional company, low debt and the lowest investment and number of employes per access line.
- Wild card: A dense population, making customers less costly to serve, but easier prey for competitors.
- Jokers: Limited population growth, plus the burden of serving high-cost rural areas in West Virginia and Pennsylvania.

Bell Atlantic's game plan is to go high-tech in a hurry — to diversify into computers and advanced information systems.

Toward that end, Thomas E. Bolger, who gave up an assured future at AT&T to head Bell Atlantic, has built a go-get-'em management team, including many key outsiders who have whipped up entrepreneurial spirit.

7 Southwestern Bell Corporation

- Ticker symbol: SBC ⊤
- Stock table abbr.: SwBell
- CEO, salary: Zane E. Barnes, $367,000
- Headquarters: St. Louis
- Assets: $15.507 billion
- Revenues: $7.755 billion
- Earnings: $870 million
- 5-year revenue growth: 15.14 percent
- Employes: 74,700
- Lines: 10,285,000

Southwestern Bell managers have always beamed over their hallmark: the blistering growth of their five-state territory, with Dallas and Houston setting the pace. Because of that, the company has posted the Bell System's fastest-growing revenues and expenses.

But keeping up with future growth could pose more serious problems here than at BellSouth.

The trouble is Southwestern Bell's debt. Past expansion construction has saddled it with $4 billion in long-term debt out of a total debt of $5 billion and given it an unhealthy debt-to-equity ratio of 44 percent. Atop that is the problem of Texas, which has half the company's lines. Its spread-out population pushes costs up and gives Texas an abnormally high percentage of in-state toll calls — a business the Baby Bells will lose. Southwestern could lose 33 percent of its Texas sales.

With challenges like that, the company has decided to "stick to its knitting," in the words of Chief Executive Zane Barnes. Southwestern Bell will focus on its basic telephone business and forgo costly diversification efforts. Its only planned new business ventures are ones that can be accomplished with existing employes.

The company's biggest advantage could be in its smooth transition. It is a single operating company being divested intact and alone, with Barnes — its chief for the past decade — at the helm.